

Just UST News

Issue No. 2

State Water Resources Control Board

Spring 2001

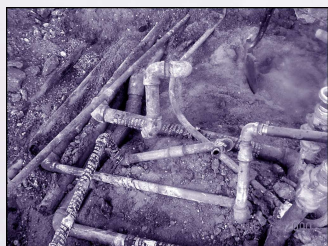
News & Views
from California's
Underground
Storage Tank
Program

Under-Dispenser Containment Deadline Coming Up

Don't forget! Under-dispenser containment (UDC) will be required on post-July 1, 1987 installed UST systems located within 1,000 feet of a public water supply well by July 1, 2001. UDC is already required on systems installed on or after January 1, 2000 and will be required on every UST system by December 31, 2003.

To see if a UST system may be located within 1,000 feet of a public water supply well, use the State Water Resources Control Board (SWRCB) environmental GIS database system, GeoTracker. You can access GeoTracker on the web at geotracker2.arsenaultlegg.com/. If you have any questions regarding the UDC requirements, please call Chuck NeSmith at (916) 341-5855.

SWRCB and Local Agencies Investigate Upgrade Violations



Unprotected steel product piping and fittings in contact with backfill. FRP piping (upper center) had a 12" drop and rise creating a "p" trap in the product line.



Zip boot on unprotected steel product piping in contact with backfill under shear valve. Zip boot installed without adhesive or pipe donut.

The SWRCB Enforcement Unit is continuing its investigation into upgrade violations by Atlantic Richfield Company (ARCO). The SWRCB was made aware of potential statewide problems in 1999 when the San Joaquin County (SJC) district attorney's office filed a complaint against ARCO for a number of upgrade violations at seven ARCO stations.

Before the December 22, 1998 upgrade deadline, SJC Environmental Health Division policy required UST owners to expose their single-walled systems to prove that they met upgrade requirements and were eligible to receive upgrade certificates. ARCO failed to meet the requirements and a Complaint for Injunction, Civil Penalties, and Other Relief was filed in March 1999. The case was subsequently settled out of court.

The nature and extent of the violations found in SJC led to a statewide investigation, which began in Sacramento County and Los Angeles County in 1999. These counties were selected for two reasons: 1) the regulators in these counties agreed to help with the investigation; and 2) UST owners were allowed to self-certify their systems in lieu of physical inspections by local agency staff.

In July 2000, ARCO agreed to inspect all 975 ARCO stations within California, regardless of age or construction and to shut down, within 72 hours, any UST systems not meeting the upgrade requirements. By the end of 2000, the SWRCB had identified over 190 UST systems that ARCO had failed to replace or upgrade. Pursuant to California statutes, the SWRCB could impose a fine of between \$500 and \$5,000 per tank system per day of violation. The California Attorney General's office is representing the SWRCB in this case.

If you have any questions, please call the Enforcement Unit at (916) 341-5798.

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Enhanced Leak Detection

Enhanced leak detection (ELD) may satisfy tank and line tightness testing requirements.

The new SB 989 regulations require ELD at certain UST facilities every three years; therefore, it is not a substitute for the monthly, yearly or biennial monitoring or testing required by California UST regulations for single-walled systems. However, if the facility is subject to tank and line tightness testing during the year that ELD is performed, and ELD is performed within a reasonable time of the tank and line tightness test due date, then ELD may be used to meet both ELD and tightness testing requirements, for that year ONLY. In order to take advantage of this "two for one" deal, obtain prior approval from your local permitting agency.

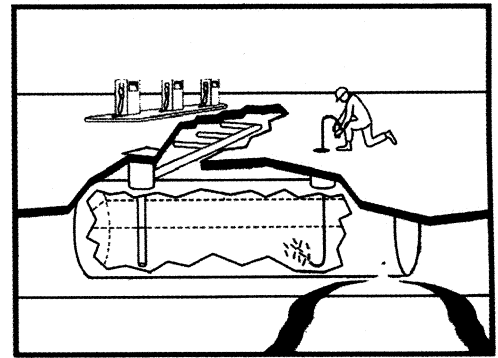
Notification of Enhanced Leak Detection Requirement

In November 2000, the SWRCB began mailing early advisory letters to UST owners and operators whose system may be subject to the enhanced leak detection requirements mandated by Senate Bill 989 (SB 989). The letters were sent to owners and operators of UST systems that the SWRCB determined are constructed with at least one single-walled component and are within 1,000 feet of a public drinking water well based on the data in the GeoTracker database. The data in GeoTracker came from UST information submitted by local agencies and public drinking water location information supplied by the Department of Health Services and local water districts.

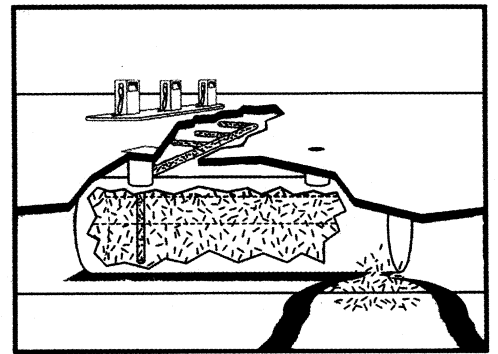
The early advisory letter informs owners and operators that current information indicates their facility may be subject to the requirement. It provides them with an opportunity to correct any inaccuracies in the information prior to official notification. If they can prove to the local agency's satisfaction that they have no single-walled components or their system is not within 1,000 feet of a public drinking water well, the SWRCB will not require them to conduct enhanced leak detection under this mandate. The advisory letter includes directions for proposing corrections to the data in the GeoTracker database.

The SWRCB adopted the regulations implementing SB 989 on February 16, 2001. The SWRCB expects to send formal notification requiring enhanced leak detection on all UST systems subject to this requirement in Spring 2001. Therefore, it is very important for local agencies to review the proposed corrections before the SWRCB mails out the formal notification letters.

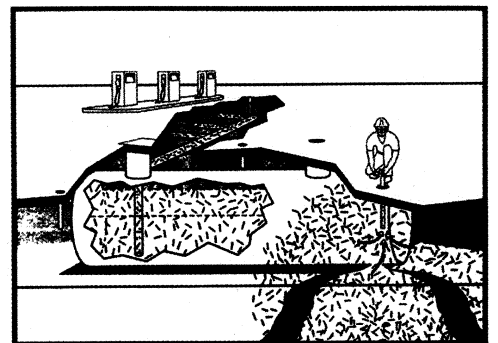
Owners and operators will have six months from notification to submit a plan for implementing enhanced leak detection to the local agency and 18 months from notification to complete testing and submit results to the local agency. Proposed regulations require enhanced leak detection to be performed every three years or until all single-walled components are replaced with double-walled components. For more information regarding enhanced leak detection or the proposed regulations please call Dave Holtry at (916) 341-5692 or Amy Tong at (916) 341-5762.



Step One:
Sampling probes are installed adjacent to the fuel system. Leak testing is performed by adding a small amount of chemical tracer to the product in the tank or piping. The tracer has no impact on the tank and piping or the product in the tank.



Step Two:
In the event the tank or piping is leaking, the tracer chemical will be transported to the soil.



Step Three:
Soil vapor samples are collected from monitoring probes surrounding the tank or adjacent to the piping. These samples are sent to the laboratory for gas chromatography (GC) analysis. Detection of the tracer in the soil indicates a leak and reveals its approximate location.

What is ISD?

By Tom Scheffelin, California Air Resources Board

Owners and operators of gasoline dispensing facilities that have vapor recovery systems may wish to consider planning for the implementation of an In-Station Diagnostics (ISD) system if they are building a new site or performing major rework at an existing site.

An ISD system monitors specific parameters to ensure the vapor recovery system is functioning properly. The parameters to be monitored include the UST ullage pressure, an indication or measurement of the volume of vapor collected by the vapor recovery system, and other measurements specific to the vapor recovery system's processor (if applicable).

ISD systems currently under development measure the UST ullage pressure either at the UST vent pipe or in the turbine sump with a pressure transducer, and use dispenser-based flowmeters to measure the volume of vapor collected at each dispenser. The sensor measurements must be transmitted from the sensor to a central data management device; therefore, dedicated electrical conduits may have to be installed. However, to reduce or eliminate the need to trench new electrical

conduits, other strategies, such as using existing electrical conduits, piggybacking on existing power lines and wireless transmission techniques are also under investigation.

In April 2003, ISD systems will be required for new sites with a throughput greater than 1,800,000 gallons per year. Existing sites in this throughput category will have four years (until April 2007) to install an ISD system. If major rework occurs during the four-year window, an ISD system must be installed at the time the rework is completed. Sites with a throughput of greater than 160,000 gallons per year and less than 1,800,000 gallons per year must comply by April 2008 (see chart); and sites with a throughput of 160,000 gallons per year or less are exempt from ISD requirements.

CARB will conduct a Technology Review in April 2002 to review the development of ISD system technologies, the implementation schedule, and the throughput categories. An ISD Pilot Program will be initiated to obtain test site data on beta ISD systems. Additional information is available at www.arb.ca.gov/vapor/evr/evr.htm. For further information, please contact Tom Scheffelin at (916) 322-8922 or tscheffe@arb.ca.gov.

Editor's Note: Because the air quality challenges of vapor recovery directly affect the UST community, the SWRCB asked California Air Resources Board (CARB) to participate in Just UST News. This is the first of a regular column by CARB presenting articles of interest and importance to the UST community.

In-Station Diagnostics Timeline



*Bar Represents Time Remaining For Use of Installed Equipment Under California 4-Year Clock

Start of Bar: Required for New Facilities

End of Bar: Required for New Facilities (installed before start of bar)

12/26/00

Don't Forget!!!

The SWRCB holds its monthly inspectors' workshop on the third Tuesday of every month. The agenda is now available on our website. To find out next month's topic and meeting location, visit: www.swrcb.ca.gov/cwphome/ust/usthmpg.htm.

Are Steel Clamps Allowed on Boots?

During last year's inspections of UST facilities with upgrade violations, the SWRCB discovered that some UST contractors install jackets or boots on primary product piping in order to isolate the piping from the backfill and/or to provide secondary containment. Often, these boots are fastened to the piping by steel clamps that are not cathodically protected. Are steel clamps buried in backfill acceptable?

On November 14, 2000, the SWRCB answered this question in a letter to local agencies. The letter states that unprotected steel clamps (including stainless steel) in contact with backfill are only appropriate if the clamps are used to temporarily hold the boot to the piping while an adhesive sets. If the steel clamps are required to keep the boot affixed to the piping after installation, "...then they are an appurtenance to piping that must be isolated from the backfill or cathodically protected in order to meet corrosion protection requirements." [See Health and Safety Code, § 25281.5; California Code of Regulations (CCR), tit. 23, § 2636, subd. (b).]

In response to that letter, some local agencies have asked the SWRCB whether a coating applied to steel clamps as a form of corrosion protection needs third-party approval before the coating may be used. The answer is yes. The regulations require that coatings applied to steel clamps for the purpose of providing corrosion protection must be approved either by an independent testing organization or a California state-registered engineer.

Section 2631(d) of Title 23 of the CCR requires that non-integral secondary containment systems are designed and constructed according to "an engineering specification approved by a state registered professional engineer" or to "a nationally recognized industry code or engineering standard". Section 2611 defines the term "integral secondary containment" as a containment system manufactured as part of the UST. Steel clamps are not integral to the secondary containment; therefore, the manufacturer of a coated steel clamp may use either of the following approaches to satisfy the requirements of Section 2631(d):

- Provide documentation that the clamp coating meets a nationally recognized industry code or engineering standard. Although not stated in the regulations, this is generally done by obtaining approval from an independent testing organization (See CCR, tit. 23, § 2611 [defining "Independent testing organization"]). This option is generally preferred by the regulatory agencies.
- Provide approval from a California registered professional engineer (PE). Note that Section 2631(d) does not require site-specific approval; therefore, an approval signed and sealed by a California registered PE is applicable at more than one site (unless the engineer's approval is based on the unique conditions at a specific facility). The PE's approval should include enough information for the local agency to review the methodology used by the engineer to arrive at the stamped conclusion (that the steel coated clamp is corrosion resistant). Although not required, it is preferable that the engineer's approval include a statement that the review and the conclusion were made in accordance with the requirements of Section 2631(d). This type of statement will help local permitting agencies verify that the components were evaluated in accordance with California requirements.

According to the State Board of Registration for Professional Engineers and Land Surveyors, registered Civil, Corrosion and Mechanical Engineers are authorized to perform corrosion evaluations. A wet signature is required on the original set of plans and approvals. It is up to the local agencies reviewing the plans to accept copies or to require submittal of original documents. For further details or any other questions regarding these issues, you may contact the Board of Registration at (916) 263-2222.

If you have any questions regarding this article you may contact Dave Holtry at (916) 341-5692 or Shahla Farahnak at (916) 341-5668.



Upcoming Training

The SWRCB is committed to providing training programs to help you keep current with technical issues. The SWRCB offers classes for both pollution prevention and remediation aspects of USTs. Some classes are intended for regulators while others are also appropriate for tank owners and operators. Course descriptions and schedules are available on the SWRCB website at www.swrcb.ca.gov/cwphome/ust/usthmpg.htm.

UST Contractor Licensing Requirements

SB 989 requires those who install, repair, maintain, or calibrate UST monitoring equipment after January 1, 2002, to have one of five contractor's licenses issued by the Contractors State License Board (CSLB).

Licenses that satisfy this requirement include:

- Class "A" General Engineering Contractors License;
- C-10 Electrical Contractor License;
- C-34 Pipeline Contractor License;
- C-36 Plumbing Contractor License; and
- C-61 (D40) Limited Specialty Service Station Equipment and Maintenance Contractor License.

Until recently, the CSLB was no longer issuing the C-61 (D40) Limited Specialty Service Station Equipment and Maintenance Contractor License. The SWRCB and the California Air Resources Board worked with CSLB for the past nine months to reactivate the C-61 (D40) license. Now, that this license will be reactivated, it will be a popular choice for those who do not currently have any of the other four licenses that satisfy the new requirement. Not only does this license more directly correlate to work performed on UST systems, it is also less expensive than the other licenses. If you have any questions regarding licensing requirements for those who install, repair, maintain, or calibrate monitoring equipment for UST systems, please call Dave Holtry at (916) 341-5692.

UST Training Standards and Best Management Practices (BMPs)

SB 989 requires UST owners and operators, service technicians, installers, and inspectors to meet minimum industry-established training standards. SB 989 also requires tank facilities to be operated in a manner consistent with industry-established best management practices (BMPs).

The SWRCB has formed a workgroup that consists of representatives from the petroleum industry, local agencies, and the SWRCB to help develop minimum industry-established training standards that UST owner/operators, service technicians, installers, and inspectors must meet. In addition to developing the training standards, the workgroup is also preparing a list of BMPs for the operation of UST facilities. The workgroup intends to complete the development of the UST training standards and BMPs by July, 2001.

If you have any questions regarding UST training standards for owner/operators, service technicians, installers, and/or inspectors, or BMPs for the operation of UST facilities, please call Dave Holtry at (916) 341-5692.

Musical Chairs

After moving to the new Cal/EPA building, not all staff ended up in the offices they were originally assigned. Some of the telephone numbers reported in the previous issue of Just UST News have been changed. For current telephone numbers, please refer to our website at www.swrcb.ca.gov/cwphome/ust/usthmpg.htm.



Site Closure Petition Fact Sheet

Recent legislation (Senate Bill 562, ch.611, statutes of 1996) allows any UST owners or operators, or other responsible parties, to petition the Board for a review of their remediation cases if they feel corrective action for their sites has been satisfactorily implemented, but closures have been denied. A fact sheet outlining the petition process is available on the SWRCB website at www.swrcb.ca.gov/cwphome/ustcf/download.htm. For questions, please call Kevin Graves at (916) 341-5782.

Environmental GIS Database System (GeoTracker)

In response to a 1997 legislative mandate (Assembly Bill 592 and Senate Bill 1189), the SWRCB contracted with Lawrence Livermore National Laboratory (LLNL) to design a system to track environmental data and water resource information in order to assess the State of California's groundwater vulnerability to MTBE (methyl-tertiarybutyl-ether).

This system, called GeoTracker, is a high-quality environmental data warehouse that uses Oracle's software and ESRI's geographical information software (GIS) to integrate and geographically display massive datasets via the Internet.

GeoTracker stores, displays and analyzes information about public drinking water wells, as well as the location of potential contaminant release sites. To make GeoTracker work, numerous regulatory agencies have submitted detailed UST construction and facility information along with water quality data. Currently, the system stores extensive data related to USTs, some of which are sources of MTBE contamination of groundwater and public drinking water wells. In the future, GeoTracker could be expanded to capture environmental data from a broad spectrum of other sites, such as above ground tanks or marina facilities, which may pose threats to drinking water sources.

GeoTracker functions primarily as an information viewing tool. Its users include local, regional, state, and federal

regulatory agencies, municipal water providers, responsible parties, environmental consultants, the Legislature, and the general public.

Responsible parties, environmental consultants, and any other interested individuals may access GeoTracker to view information such as UST facilities and well locations.

Responsible parties are also beginning to use GeoTracker to report unauthorized releases to the regulatory agency.

Regulatory agencies can use GeoTracker as an electronic network to exchange and integrate data among the SWRCB, RWQCBs and local regulatory agencies. GeoTracker enables regulators to quickly access and analyze a large amount of site data in order to focus resources and make cleanup decisions that maximize the protection of water resources. This flexible approach allows regulators to integrate and analyze information from multiple agencies and to create reports and maps.

Local agency regulators may download data to conduct more specialized region-specific or site-specific GIS analysis or to generate customized maps for public presentation using GIS software (such as ArcView). Thus, GeoTracker is a complement to and supports current agency GIS efforts.

For more information, please visit the GeoTracker demonstration website at geotracker2.arsenaultlegg.com/gdemo. To access the GeoTracker website, go to geotracker2.arsenaultlegg.com. For questions regarding this project, please call Amy Tong at (916) 341-5762.

SWRCB Tests Discriminating Sensors

Sensors are used to detect leaks in various locations in UST systems. They are installed in the interstitial space of double-walled tanks, turbine sumps, fill sumps and under-dispenser containment sumps. Regardless of their location, their function is always the same: to determine whether there is liquid in an area that should be dry. Discriminating sensors are those that can distinguish between product and water.



In the first phase of this project, the SWRCB field-tested one manufacturer's full line of discriminating sensors. Local agency
Pouring fuel into test containers for annual certification testing of discriminating sensors.

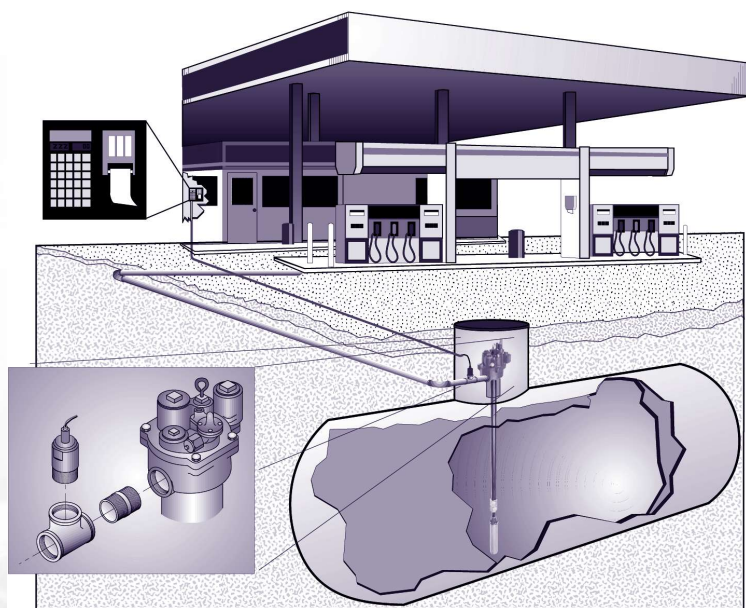
local agencies, the SWRCB is tackling a new project to evaluate the performance of discriminating sensors. Working closely with manufacturers and local agency inspectors, the

- evaluate the functionality of sensors used in California;
- work with manufacturers to develop a field-testing procedure for their equipment; and
- determine if sensors perform consistently in the field using the specifications provided in the third-party evaluations.

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Leak Detection – Does it Work?

Studies of UST systems indicate most leaks are detected during closure and not by leak detection methods. Why?



The SWRCB in attempting to answer this question by performing field evaluations of some types of leak detection equipment at operating UST facilities. Since single-walled UST components are more likely to impact the environment, the study will focus on leak detection methods most commonly used with single-walled systems: line leak detection (LLD) and automatic tank gauging (ATG) equipment.

Leak detection equipment might not detect leaks for various reasons:

- Leaks may occur at rates lower than those specified in the Federal and California UST regulations (California Code of Regulations [CCR], Title 23, Division 3, Chapter 6);
- Leak detection equipment may be disabled or used improperly;
- Leak detection equipment may not function properly; or
- Leak detection results may be interpreted incorrectly, ignored or not reported.

The approach of the study is to simulate artificial leaks in operating UST systems (without actual releases to the environment) and evaluate the equipment's ability to quantitatively detect the simulated leak rates. The

goal of the field study is to evaluate the effectiveness of both mechanical and electronic LLDs and ATGs in operating UST systems.

Recent legislation (Senate Bill 989, ch.812, statutes of 1999) calls for more rigorous leak prevention (e.g., under dispenser containment, enhanced leak detection, periodic secondary containment testing, etc.). Further evaluation of the ability of LLD and ATG equipment to function in the field will help determine if additional requirements are necessary.

The SWRCB has prepared a Request for Proposal (RFP) outlining the scope of work of the proposed field study, which is to be completed within one year of the signed contract. The scope of work for the LLD and ATG study includes field-testing of the equipment in operating UST systems, analysis of the data collected in the field, and preparation of a report.

After the SWRCB's contract office approves the contract language, the SWRCB plans to send the RFP to contractors. Upon detailed review of submitted proposals, the SWRCB intends to select a contractor to perform the study. If you have any questions about this project, please call Erin Ragazzi at (916) 341-5863 or Shahla Farahnak at (916) 341-5668.

Demystifying the State Job Application Process

Thinking of a career with the State of California?

While a career in public service can be rewarding, obtaining a job with the State of California is a

multi-step process that some people find

confusing. The State

Personnel Board (SPB)

has demystified the

procedure by providing an

interesting, step-by-step

overview of the application

process. Visit the SPB

website at

www.spb.ca.gov/stepsrd.

cfm. If you would like to

be considered for

employment within the

SWRCB, visit us at

www.swrcb.ca.gov/ for a

list of current openings.

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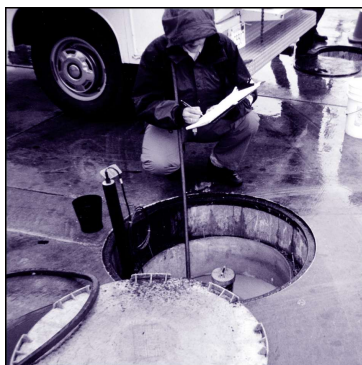
- Local Implementing Agencies
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- Other Interested Parties

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Waiting for discriminating sensor to "recover" after testing in fuel.

inspectors and the Veeder-Root Company coordinated with the SWRCB to evaluate Veeder-Root sensors at UST facilities in Santa Ana, Oakland and Santa Monica. Not only have we gathered valuable real-world performance data, but also Veeder-Root is developing a field-testing procedure which can be used as part of the sensors' annual maintenance inspection.

Next, the SWRCB intends to ask other discriminating sensor manufacturers to assist with testing their sensors in the field. The SWRCB will work with local agencies to identify which sensors are used at particular sites in their area and to set up inspections. To minimize the impact to owners, operators and local agencies, the SWRCB will attempt to coordinate the sensor testing with the annual inspection. If you have any questions regarding this project, please contact Shahla Farahnak at (916) 341-5668.

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